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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,411	06/30/2003	Scott Manzo	017516-009700US	2194

7590

07/13/2005

PATENT DEPT  
INTUITIVE SURGCAL. INC  
950 KIFER ROAD  
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EXAMINER

VRETTAKOS, PETER J

ART UNIT

PAPER NUMBER

3739

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No. 10/611,411	Applicant(s) MANZO ET AL	
	Examiner Peter J. Vrettakos	Art Unit 3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 and 48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11-26-03</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

The Applicant has elected without traverse claims 1-19 and 48 on 6-30-05.

Non-elected claims 20-47 are cancelled.

### ***Drawings***

The drawings submitted 6-30-03 are informal.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The application does not provide sufficient description of a spring member and lock-out feature. It might also be argued that each of these claims describe a *separate species*. (Spring member versus gripping member versus threading versus latching member; disposable device parts versus indisposable device parts.)

*Claim 14 has no period.*

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8, 10-11, 13 15, and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Ellman et al. (5,630,812).

Independent claims 1 and 48 (non-claim language below refers to Ellman)

1. An end-effector device (see figure 1) for use with an electrosurgical instrument (80-10-8, col. 4:13-16) for robotic surgery (intended use language), the end-effector device comprising:

at least one active electrode (74) at a distal end of the device;

coupling means (58-24-22) adjacent a proximal end of the device for coupling the device

with the electrosurgical instrument; and

at least one insulation material (44, col. 3:29-32) disposed at least partially around the active electrode for inhibiting conduction of electrical current from the active electrode to the electrosurgical instrument.

48. An electrocautery end-effector (74) for use with an electrosurgical instrument (80-10-8, col. 4:13-16) comprising a shaft (10), an end-effector (74) removably coupled (see

figure 1) to a distal end (16) of the shaft, and an interface (62, figure 2) coupleable to a proximal end of the shaft (10), the electrosurgical instrument for use with a robotic surgery system (intended use language), the electrocautery end-effector (74) comprising: an electrocautery hook ("wire loop", col. 5:15-18) or spatula; an end-effector sleeve (44) disposed at least partially around the hook or spatula, the sleeve having threading (58, col. 3:37) for attachment with complimentary threading (22, col. 3:36-38) on a mating component (16) permanently attached to the distal end of the shaft (10, see figure 5); an electrical connector (24, col. 3:23-24) within (fully assembled Ellman invention) the sleeve (44) for electrical connection with a transmission member (60) via a gripping member (20, the protrusion 20 permits the electrosurgical instrument which includes 80-10-8 and 16 as shown in figure 5 to "grip" element 44) of the mating component (16); and at least one insulation material (44) disposed at least partially around the hook ("wire loop", col. 5:15-18) or spatula for inhibiting conduction (when the Ellman device is not tightly screwed together) of electrical current from the active electrode to the electrosurgical instrument.

Note: Ellman makes no mention of robotic surgery, however, **the Applicant has not claimed any structural element that precludes anticipation by Ellman.** In other words, nothing structural is claimed exclusive to robotic surgery.

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Dependent claims

2. An end-effector device as in claim 1, wherein the at least one active electrode comprises a scalpel blade, a beaver blade, a hook, a spatula, movable jaws, scissors, a needle point (see 74 in figure 1), hockey stick, dissectors, or a probe.
3. An end-effector device as in claim 1, wherein the at least one active electrode transmits radiofrequency energy (this is inherent to an electrosurgical cautery device with an electrode).
4. An end-effector device as in claim 1, wherein the coupling means (24) provides for removable (depicted in figure 2) coupling of the device with the electrosurgical instrument.
5. An end-effector device as in claim 4, wherein the coupling means comprise mechanical attachments (threads 58 and 22).
6. An end-effector device as in claim 5, wherein the coupling means comprise threading (58) within an end-effector sleeve (44) for attachment with complimentary threading (22) on a mating component (16) permanently attached to the electrosurgical instrument (80-10).

7. An end-effector device as in claim 5, wherein the coupling means (58-24-22) comprise at least one spring tab or latching member (14, 52, figure 2) on the proximal end of the device (74) for attachment with at least one protrusion (20) within a housing (16) permanently attached to the electrosurgical instrument (80-10-8).

8. An end-effector device as in claim 4, wherein the coupling means comprise electrical (conductor 24 between electrode 74 and electrical cable 60) attachments (24, col. 3:23; 60, col. 3:40-41).

10. An end-effector device as in claim 8, wherein the coupling means comprise an electrical connector (74 rests in bore 38 of conductive element 24) on the proximal end of the device (74) for electrical connection with a transmission member (60) via a gripping member (20, the protrusion 20 permits the instrument which includes 80-10-8 and 16 as shown in figure 5 to "grip" element 44) of the electrosurgical instrument.

11. An end-effector device as in claim 8, wherein the coupling means comprise an electrical connector (24) on the proximal end (rests in bore 38) of the device (74) and an electrical tab (created by bore 28) on the proximal end of the electrical connector (24) for electrical connection with a transmission member (60) via an electrical platform of the electrosurgical instrument.

13. An end-effector device as in claim 4, wherein the end-effector device is disposable (col. 22-23).

15. An end-effector device as in claim 1, wherein the coupling means provides for permanent coupling (soldering at 64 in figure 2; col. 3:44) of the device with the electrosurgical instrument (includes cable 60).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellman in view of Sharkey et al. (6,007,570).

*Ellman neglects to expressly disclose silicone potting.*

Sharkey in an analogous electrosurgical device discloses silicone potting (col. 18:32-35). Also see more references to silicone as a constituent of the analogous device in col. 21:37-44 and col. 17:1-5. Dual layering is inferred in col. 21:37-44 where silicone is posited for inside an electrosurgical device with a polyimide sheath, which



can also suggestively be numerous other materials including insulating plastic (col. 17:1-5).

Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify Ellman in view of Sharkey by including as constituents of the Ellman electrosurgical device, those found in Sharkey such as silicone and insulating plastic. The motivation would be to remove air from inside the device (Sharkey col. 21:39), support the sheath or encasement of the Ellman device (Sharkey col. 21:41), and to use insulating materials that are well known and tested in the field of electrosurgical devices.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tierney et al. (6,491,701);(6,331,181).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J. Vrettakos whose telephone number is 571-272-4775. The examiner can normally be reached on M-F 9-6.

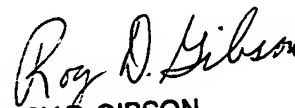
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C. Dvorak can be reached on 571-272-4764. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Pete Vrettakos  
July 10, 2005



  
ROY D. GIBSON  
PRIMARY EXAMINER